UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,428	03/29/2001	Jen-Kai Chen	JCLA5383	1751

23900 7590 05/05/2005	EXAMINER
J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618	LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/821,428	CHEN ET AL.
	Examiner	Art Unit
	Dmitry Levitan	2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>29 March 2001</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,11 and 16</u> is/are rejected.

7) ☒ Claim(s) <u>2-10, 12-15 and 17-20</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>29 March 2001</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>03/29/01</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

Drawings

1.   The drawings are objected to because of typographical errors on Fig. 5. Corrected

drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to

avoid abandonment of the application. Any amended replacement drawing sheet should include

all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from

the replacement sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities: typographical errors

on page 11, line 15, page 18, line11 and page 19, line 9.

          Appropriate correction is required.

Claim Objections

3.   Claim 11 is objected to because of the following informalities: typographical error on

line 2 (switchdevice).

4.   Claims 2 and 12 recite the limitation "the virtual free space" in line 10. There is

insufficient antecedent basis for this limitation in the claim.

5.   Claim 15 recites the limitation "the virtual free space" in line 4. There is insufficient

antecedent basis for this limitation in the claim.

6.   Claim 16 recites the limitation "the type of congestion control" in line 4. There is

insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kozaki (US

5,838,677).

Kazaki teaches a system and a method for a switch controller inside a switch device for reducing

network congestion (a switching system on Fig. 1 and 2:11-39, including the congestion control),

the switch controller has a plurality of ports (input ports L1 and output ports L15 on Fig. 1) and

the switch device further includes a shared buffer (shared buffer 11 on Fig. 1 and 4:65-67, 5:1-4)

and a plurality of physical layer devices (Optical/Electrical converter circuits 20, 21 and

termination circuit 22 on Fig. 1 and 4:41-49), the shared buffer can be divided into a plurality of

buffering units (storage areas of individual cells, identified by their addresses and controlled as

shown on Fig. 2 and 5:49-58), the switch controller comprising:

A buffer control device coupled to the shared buffer for assigning and releasing the

buffering units (read/write devices 131-133 and 136 of shared buffer control unit 13 on Fig. 1

and 2, coupled to the shared buffer 11 on Fig. 1 and controlling/assigning empty address buffers

utilizing empty address buffer 133 on Fig. 2 and 6:7-14),

A plurality of port control devices coupled to the physical layer devices (header control

circuit 24, buffer 25, input buffer control circuit 26 and congestion information addition circuits

14 on Fig. 1 and 5:38-44, coupled to the physical layer devices on Fig. 1) and the buffer control

device (shared buffer control unit 13), wherein each port control device has one-to-one

correspondence with the ports (as shown on Fig. 1, where each control circuit is assigned to a

port), the port control device that corresponds to a source port receives a network packet and

then sends the packet to at least one of the buffering units for storage (input buffer control circuit

26 writes a received cell into a cell storage area of the shared buffer 11 4:53-67),

A forwarding control device coupled to the port control devices and a target port of the

packet is determined according to a header of the network packet (call control unit 4:35-39,

inherently forwarding packets to target port based on the packet headers, because packet

forwarding is essential for any packet switch operation) and

A queue control device coupled to the port control devices and the buffer control device

(congestion state RAM 13d on Fig. 2 coupled to the port control devices by L14 and coupled to

the buffer control device as shown on Fig. 2), wherein the queue control device further includes a

plurality of output queues, each output queue has one-to-one correspondence with the port

control devices, each output queue has a number of reserved buffering units (queues made of

address chains for each output line/port 4:65-67 and 5:1-4, comprising predetermined queue

threshold values for congestion identification 5:24-31), and the buffering unit for storing the

packets is linked to the output queue corresponding to the port control device in a target port

(shared buffer 11 on Fig. 1),

Wherein the source port triggers or terminates a congestion mode to control the number

of free buffering units in response to the number of reserved buffering units in the output queue

(output of buffer 25, connected to a source port, suppresses reading of input cells 5:24-48 until a

recovery notice, controlling the number of free buffering addresses, avoiding empty area

insufficiency in the shared buffer 3:35-43).

In addition to claim 11, Kozaki teaches a triggering or a terminating condition of the

source port (each input line suppresses reading packets, destined to the congested output port,

until a recovery notice 3:35-43).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   Claim 16 is rejected (as understood) under 35 U.S.C. 103(a) as being unpatentable over

Kazaki in view of Chiou (US 6,577,625).

Kazaki substantially teaches the limitations of claim 16, including

Outputting the network packet from the target port (outputting cells 5:5-11),

Releasing the buffering unit after the network packet is output (storing an address of read cell in

the empty address buffer 133 on Fig. 2 and 6:7-13).

Kazaki does not teach selecting the type of congestion control in response to an external network

device.

Chiou teaches selecting the type of congestion control in response to an external network device

(selecting Congestion control threshold values in response to the mode, 10 or 100 Mbps, of an

external network as shown in Tables 1 and 2 9:14-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to add teachings of Chiou to the system of Kazaki to improve the system compatibility with

different speed networks by selecting appropriate congestion control threshold values according

the external network speed.

Allowable Subject Matter

11.   Claims 2-10, 12-15 and 17-20 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims and resolving the claims objections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dmitry Levitan
Patent Examiner
04/26/05.